

Patent claims

1. A probe (1) for electrical measurement methods,  
which has a substrate (16),  
5 mounted on which are two electrical components (47),  
which come to rest on a test piece (10),  
the probe (1) with the substrate (16) being so flexible  
that the probe (1) with the substrate (16) can adapt itself  
to different radii of curvature of the test piece (10),

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characterized

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in that the probe (1) has a backing (22),  
which at least partly covers at least one electrical  
component (4, 7), and  
which (22) is formed elastically, especially permanently  
elastically,

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in that the probe (1) comprises an exciter winding (4) as  
the first electrical component and a signal coil (7) as the  
second electrical component,

in that the exciter winding (4) encloses the coil sections  
of the signal coil (7),

in that the probe (1) has at least a baseline of 2.3 mm and  
in that the exciter coil (4) has at least nine windings and  
25 the signal coil (7) has at least five windings.

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2. The probe as claimed in claim 1,  
characterized in that

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the substrate (16) is a flexible film.

3. The probe as claimed in claim 2,  
characterized in that

the film (16) is formed from polyimide.

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4. The probe as claimed in claim 1,  
characterized in that

10 the backing (22) is formed by an elastic, especially  
permanently elastic, sheet of a ferritic material.

5. The probe as claimed in claim 1,  
characterized in that

15 the backing (22) is formed by an elastic, especially  
permanently elastic, casting compound (34), especially  
filled with ferrite particles.

- 20 6. The probe as claimed in claim 1,  
characterized in that

the probe (1) has as an electrical component at least one  
coil (4, 7), which is arranged on the substrate (16) in a  
planar manner.

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7. The probe as claimed in claim 1,  
characterized in that

30 the probe (1) is a probe (1) for an eddy current  
measurement.

8. The probe as claimed in claim 1,  
characterized in that

5 the probe (1) has a ferromagnetic signal amplification  
(22).

9. The probe as claimed in claim 1,  
characterized in that

10 the probe (1) is adaptable to radii of curvature of up to  
50 mm.

10. The probe as claimed in claim 1,  
characterized in that

15 the backing (22) is a gas-filled material.

11. The probe as claimed in claim 1,  
characterized in that

20 the exciter coil (4) and the signal coil (7) are arranged  
in one plane.

12. The probe as claimed in claim 1,  
characterized in that

25 the entire region to be examined is covered by the probe  
(12).